

**Podoplanin Rabbit pAb**  
**Podoplanin Rabbit pAb**  
**Catalog # AP94535****Specification**

---

**Podoplanin Rabbit pAb - Product Information**

Application	IHC-P, WB
Primary Accession	<a href="#">O62011</a>
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	18233

**Podoplanin Rabbit pAb - Additional Information****Gene ID** 14726**Other Names**

Podoplanin, Pdpn {ECO:0000312|MGI:MGI:103098}

**Format**

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

**Storage**

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

**Podoplanin Rabbit pAb - Protein Information****Name** Pdpn {ECO:0000312|MGI:MGI:103098}**Function**

Mediates effects on cell migration and adhesion through its different partners. During development plays a role in blood and lymphatic vessels separation by binding CLEC1B, triggering CLEC1B activation in platelets and leading to platelet activation and/or aggregation (PubMed:<a href="http://www.uniprot.org/citations/14522983" target="\_blank">14522983</a>, PubMed:<a href="http://www.uniprot.org/citations/15231832" target="\_blank">15231832</a>, PubMed:<a href="http://www.uniprot.org/citations/17616532" target="\_blank">17616532</a>, PubMed:<a href="http://www.uniprot.org/citations/20110424" target="\_blank">20110424</a>). Interaction with CD9, on the contrary, attenuates platelet aggregation and pulmonary metastasis induced by PDPN. Mediates effects on cell migration and adhesion through its different partners. Through MSN or EZR interaction promotes epithelial-mesenchymal transition (EMT) leading to ERZ phosphorylation and triggering RHOA activation leading to cell migration increase and invasiveness. Interaction with CD44 promotes directional cell migration in epithelial and tumor cells (By similarity). In lymph nodes (LNs), controls fibroblastic reticular cells (FRCs) adhesion to the extracellular matrix (ECM) and contraction of the actomyosin by maintaining ERM proteins (EZR; MSN and RDX) and MYL9 activation through association with unknown transmembrane proteins. Engagement of CLEC1B by PDPN promotes FRCs relaxation by blocking lateral membrane

interactions leading to reduction of ERM proteins (EZR; MSN and RDX) and MYL9 activation (PubMed:<a href="http://www.uniprot.org/citations/25347465" target="\_blank">25347465</a>). Through binding with LGALS8 may participate in connection of the lymphatic endothelium to the surrounding extracellular matrix (By similarity). In keratinocytes, induces changes in cell morphology showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion (PubMed:<a href="http://www.uniprot.org/citations/10574709" target="\_blank">10574709</a>). Controls invadopodia stability and maturation leading to efficient degradation of the extracellular matrix (ECM) in tumor cells through modulation of RHOC activity in order to activate ROCK1/ROCK2 and LIMK1/LIMK2 and inactivation of CFL1 (By similarity). Required for normal lung cell proliferation and alveolus formation at birth (PubMed:<a href="http://www.uniprot.org/citations/12654292" target="\_blank">12654292</a>). Does not function as a water channel or as a regulator of aquaporin-type water channels (By similarity). Does not have any effect on folic acid or amino acid transport (PubMed:<a href="http://www.uniprot.org/citations/12032185" target="\_blank">12032185</a>).

### Cellular Location

Membrane; Single-pass type I membrane protein. Cell projection, lamellipodium membrane; Single-pass type I membrane protein. Cell projection, filopodium membrane; Single-pass type I membrane protein. Cell projection, microvillus membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane; Single-pass type I membrane protein. Membrane raft {ECO:0000250|UniProtKB:Q86YL7}. Apical cell membrane {ECO:0000250|UniProtKB:Q86YL7}. Basolateral cell membrane {ECO:0000250|UniProtKB:Q86YL7}. Cell projection, invadopodium {ECO:0000250|UniProtKB:Q86YL7}. Note=Localized to actin-rich microvilli and plasma membrane projections such as filopodia, lamellipodia and ruffles (PubMed:10574709). Association to the lipid rafts is required for PDPN-induced epithelial to mesenchymal transition (EMT) Colocalizes with CD9 in tetraspanin microdomains. Localized at invadopodium adhesion rings in tumor cell. Association to the lipid rafts is essential for PDPN recruitment to invadopodia and ECM degradation (By similarity). {ECO:0000250|UniProtKB:Q86YL7, ECO:0000269|PubMed:10574709}

### Tissue Location

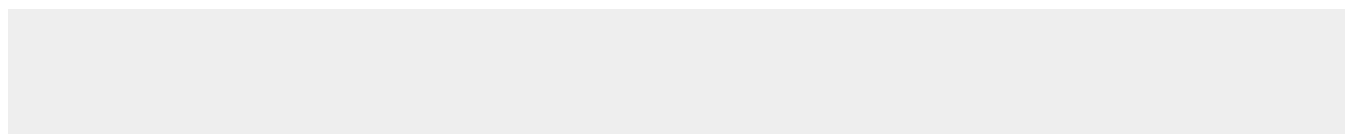
Detected at high levels in lung and brain, at lower levels in kidney, stomach, liver, spleen and esophagus, and not detected in skin and small intestine. Expressed in epithelial cells of choroid plexus, ependyma, glomerulus and alveolus, in mesothelial cells and in endothelia of lymphatic vessels. Also expressed in stromal cells of peripheral lymphoid tissue and thymic epithelial cells. Detected in carcinoma cell lines and cultured fibroblasts. Expressed at higher levels in colon carcinomas than in normal colon tissue

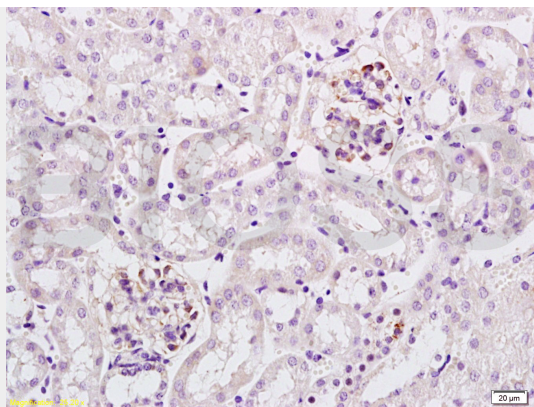
### Podoplanin Rabbit pAb - Protocols

Provided below are standard protocols that you may find useful for product applications.

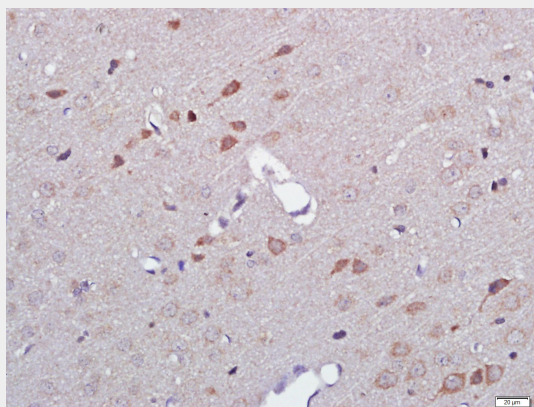
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Podoplanin Rabbit pAb - Images

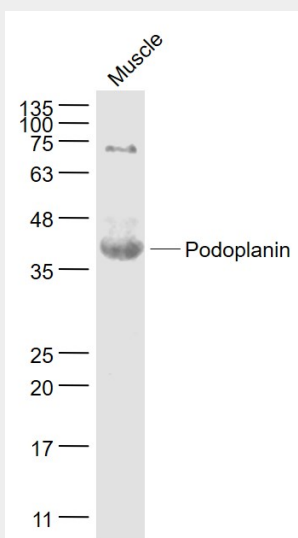




Tissue/cell: mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-Podoplanin Protein/gp36 Polyclonal Antibody, Unconjugated(AP94535) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (rat brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Podoplanin) Polyclonal Antibody, Unconjugated (AP94535) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Sample: Muscle (Mouse) Lysate at 40 ug Primary: Anti- Podoplanin (AP94535) at 1/1000 dilution  
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 15 kD  
Observed band size: 37 kD

**Podoplanin Rabbit pAb - Background**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.